CHUYKO, N.M., doktor tekhn. nauk; PEREVYAZKO, A.T., inzh.;
MOSHKEVICH, Ye.I., inzh.

Production of dense ingots of transformer steel. Met. i gornorud. prom. no.6:14-15 N-D '62. (MIRA 17:8)

1. Dnepropetrovskiy metallurgicheskiy institut (for Chuyko, Perevyazko). 2. Zavod "Dneprospetsstal'" (for Moshkevich).

CHUYKO, N.M.; PEREVYAZKO, A.T.; DANICHEK, R.Ye.; MOSHKEVICH, Ye.I.

Effect of the hemical composition of the metal and its content in nitrogen and oxygen on the electrical properties of E3 transformer steel. Nauch. trudy DMI no.51:3-16 '63. (MIRA 17:10)

CHUYKO, N.M.; PEREVYAZKO, A.T.; GALITSKIY, Yu.P.

Gas removal from a stream of transformer steel during decantation under vacuum. Nauch. trudy DMI no.51:17-29 '63.

(MIRA 17:10)

CHUYKO, N. M.; PEREVYAZKO, A. T.; MOSHKEVICH, Ye. I.; SMOLYAKOV, V. F.

Vacuum treatment of liquid steel in the ladle or while pouring.
Izv. vys. ucheb. zav.; chern. met. 7 no.6:62-67 '64. (MIRA 17:7)

1. Dnepropetrovskiy metallurgicheskiy institut i zavod "Dneprospetsstal'".

S/133/62/000/009/003/009
A054/A127

AUTHORS: Chuyko, N.M., Doctor of Technical Sciences, Rutkovskiy, V.B., Danichek, R.Ye., Pereyvazko, A.T., Borodulin, G.M., Tregubenko, A.F., Shamil', Yu.P., Frantsov, V.P., Volovich, V.G., - Engineers

TITLE: Blowing inert gases through the metal in the ladle under vacuum

PERIODICAL: Stal', no. 9, 1962, 809 - 811

TEXT: Vacuum treatment of liquid steel promotes the removal of gases and reduces the amount of nonmetallic inclusions. Tests were carried out (in cooperation with I.M. Ioffe, M.I. Lavrent'yev, G.P. Parkhomenko, V.I. Demidenko, Ye.M. Rysin, and T.M. Vorob'yeva, Engineers) to determine the optimum methods of blowing inert gases through the liquid metal in the ladle in combination with the vacuum treatment. The method established does not require special refractory materials, the apparatus used (designed by N.M. Chuyko, Professor and Ye.I. Lavreyev, Engineer) is of a simple design and metal losses through the spout can be prevented. The argon feed can be controlled very closely by means of 3 rotameters [PC-7 (RS-7) type], having 30 standard m^3/h capacity and supplied with

Blowing inert gases through the metal in ....

needle valves. The test steel [ШХ15 (ShKh15)] was smelted in four versions: I. blowing through the reduced metal in the ladle under atmospheric pressure; II. the same, under vacuum; III. vacuum treatment of non-reduced metal, containing less than 0.05% Si, in the ladle and reduction with ferrosilicon and aluminum at the end of the process; IV. blowing through non-reduced metal in the ladle under vacuum, with addition of ferrosilicon and aluminum at the end of blowing. Ferrosilicon was added in an amount to ensure 0.27 - 0.28% Si content in the metal, the amount of aluminum added was 0.5 kg/ton. The technically pure argon gas contained 0.003 - 0.009% oxygen and maximum 0.01% nitrogen. The hydrogen content of the metal (both in reduced and non-reduced condiction) could most efficiently be removed when argon gas was blown through at residual pressures of 10 - 12 mm mercury column in the vacuum chamber, with a blowing time of at least 8 min. A maximum reduction of the oxygen content can be obtained by blowing gas into the ladle through non-reduced metal under vacuum (IV). With regard to nonmetallic inclusions the best results are attained by versions III and IV. Some of the heats were entirely without spheroidal inclusions. The amount of oxygen and of impurities also depends on the degree of reduction of the slag, in view of the intensive mixing of metal and slag during blowing. The

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Blowing inert gases through the metal in ....

lowest oxygen content (0.0019%) and the smallest number of oxide and spheroidal inclusions are ensured when argon is blown in amounts of 0.05 - 0.06 m^3/ton, under vacuum, at remanent pressures of 18 - 30 mm Hg. The intense stirring of the metal caused by the argon gas blown into the ladle also causes a uniform distribution of silicon in the bottom part of the ladle and its complete adsorption. There are 3 figures. The English-language reference is: Iron and Steel Engineer, 1959, v. 36, no. 9 (September), 192.

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GALITSKIY, Yu.P.; CHUYKO, N.M., PRIKHVYAZKO, A.T.; MOSHKEVICH, Ye.I.; ZALIKSON, G.L.

Changes in the nitrogen content of metal during smelting and its effect on the properties of a transformer sheet. Stal' 25 no.3:257-261 Mr '65. (MIRA 18:4)

1. Dnepropetrovskiy metallurgicheskiy institut i zavod "Dneprospetsstal'".

CHUYKO, N.M.; GALITSKIY, Yu.P.; PEREVYAZKO, L.T.

Effect of the content of nonmetallic inclusions and oxygen on the electric engineering properties of cold rolled transformed sheet. Stal' 24 no.10:918-921 O '64. (MIRA 17:12)

BERENSHTEYN, S.A.; VAYSLEYB, V.P.; VARENIK, I.F.; DOBRYNCHENKO, M.V.; YEGOROV, B.P.; KLISENKO, Yu.F.; MOGILEVSKIY, I.I.[deceased]; PERKVASLAVTSEV, N.A.; PILIPENKO, V.I.; SAPOZHNIKOV, F.V., inzh.; SHEPELEV, V.M.; SHMULEVICH, M.L.; YARMOLINSKIY, I.M.; SHAGALOV, Ye.S., red.; KORIKOVSKIY, I.K., red.; LARIONOV, G.Ye., tekhn. red.

[Construction of the V.I.Lenin State Regional Electric Power Plant in Simferopol] Opyt stroitel'stva Simferopol'skoi GRES im. V.I.Lenina [By] S.A.Berenshtein i dr. Moskva, Gosenergoizdat, 1962. 151 p. (MIRA 15:6)

(Simferopol--Electric power plants)

PEREYASLAVSKAYA, P.M.

Synoptic conditions of arid periods in eastern provinces of the Ukraine during the warm seasons of the year. Trudy Ukr NIGMI no.10:87-92 '59. (MIRA 13:5)

1. Khar'kovskaya gidrometeorologicheskaya observatoriya.
(Ukraine--Droughts)

PEREYASLAVSKIY, I.K. [Pereiaslavs'kyi, I.K.], kand.sel'skokhoz.nauk

Regular features in the changeability of the specific weight and volume of tubular bones in the fetus of a horse. Visnyk sil'hosp.nauky 4 no.8:110-111 Ag '61. (MIRA 14:7)

1. Khar'kovskiy zooveterinarnyy institut.
(Fetus) (Bones) (Horses—Physiology)

PEREYASLAVTSEV, N.A., inzh.; KISILIYER, M.I., inzh.; RIVKIN, S.A., kand. tekhn. nauk; LYSENKO, Ye.F., inzh.

Precast reinforced concrete shells for covering the main housings of thermal electric power plants. Energ. stroi. no.33:14-20 '63. (MIRA 17:8)

1. Kiyevskoye otdeleniye Vsesoyuznogo gosudarstvennogo proyektnogo instituta stroitel'stva elektrostantsiy (for Pereyaslavtsev Kisiliyer). 2. Kiyevskiy inzhenerno-stroitel'nyy institut (for Rivkin, Lysenko).

KRASOVITSKIY, B.M.; PEREYASLOVA, D.G.; TITARENKO, N.I.

Effect of steric factors on the properties of dyes containing a biphenyl nucleus. Part 14: Comparative study of the dyeing and affinity for cotton of some azo dyes, viz. derivatives of biphenyl, bibenzyl, trans-stilbene, tolane, and azobenzene. Ukr.khim.zhur. 26 no.1:73-77 '60. (MIRA 13:5)

1. Khar'kovskiy gosudarstvennyy universitet imeni A.M.Gor'kogo i Khar'kovskiy institut Sovetskoy torgovli.
(Azo dyes)

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CA PEREVYAZKINA, L.M.

The role of tannins in the phenomena of resistance of
cotton plant to wilt B. A. Rubin and L. M. Perevyazkina
(M. V. Lomonosov State Univ., Moscow). Doklady Akad.
Nauk S.S.S.R. 70, 303-6(1951). Infection by Verticillium
albo-atrum causes a rise of total tannins in the cotton plant
the sol. fraction of polyphenols also rises. The rise of tan
nin is especially noticeable in varieties of cotton that are
wilt-resistant and especially considerable rise occurs in the
sol. polyphenol fraction. This increase may be twice that
suffered by the nonresistant varieties of the plant. The
above data are generally true for the roots and stems, but
in the leaves the resistant varieties show a sharp drop of
tannins after infection, while the nonresistant specimens
either show no change or a slight rise. No general correla
tion between wilt resistance and the relative proportion of
sol. polyphenol fraction was found, in the healthy plants.
After infection, however, the resistant plants show a much
higher proportion of the polyphenols in the roots and a de
cline in the leaves. The nonresistant specimens show a
small rise in the roots and stems only in the early stages.
G. M. Kosolapoff

Perevyazkina, L. M.

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Oxidative changes of the tannic substances and their relationship to the stability of cotton to wilt. B. A. Rubin, L. M. Perevyazkina, and N. P. Volobueva. *Vestnik Moskov. Univ.* 7, No. 12, *Ser. Fiz.-Mat. i Estestven. Nauk* No. 8, 63-75(1952); cf. *C.A.* 45, 10314e.—Authors have studied content of tannic substances, of polyphenols, and activity of polyphenol oxidase with pyrogallol substrate. Enzyme activity is detd. manometrically with the Warburg app. They find that stable varieties of cotton can mobilize tannic substances from the leaves to the roots and that oxidative processes in the stable plants are increased. There are corresponding losses of tannic substances and sol. polyphenols from the leaves in the stable varieties. They find that wilt resistance is not due to any abs. content of tannic substances, as some previous authors have believed. Data for stable and unstable varieties, both control and infected plants, is clearly tabulated and graphed to show the plant's defensive mobilization. Tannide content increases in the infected plants at the expense of the sol. polyphenols. Authors' findings agree with previous work of Grbanov. (*Izvest. Akad. Nauk S.S.S.R., Ser. Biol.*, 1949, 509–18). Previous investigation has shown oxidation products of polyphenols to be toxic for fungi. Reduced O content in the medium also helps to inhibit growth of fungi.

A. W. Daly

1. PEREVYAZKINA, L. M., RUBIN, B. A.

2. USSR (600)

7. "The Role of Tannins in the Phenomena of Cotton's Resistance to Wilt", DAN SSSR (Papers of the Acad Sci USSR), Vol 79, No 2, pp 303-306.

9. Mikrobiologiya, Vol XXI, Issue 1, Moscow, Jan-Feb 1952, pp 121-132. Unclassified.

ACCESSION NR: AT4012713 S/2981/63/000/002/0058/0063

AUTHOR: Kishnev, P. V.; Matveyev, B. I.; Zolotov, V. S.; Perevyazkin, L. S.

TITLE: Influence of the degree of deformation and the rate and temperature of pressing on the mechanical properties of pressed blanks

SOURCE: Alyuminiyevy*ye splavy*. Sbornik statey, no. 2. Spechenny*ye splavy*. Moscow, 1963, 58-63

TOPIC TAGS: powder metallurgy, pressed product, deformation, pressing temperature, pressing rate, aluminum powder

ABSTRACT: The flow process for manufacturing pressed powder products may be improved by taking into account the influence of the degree of deformation and rate and temperature of pressing. Proper choice of these parameters improves the quality of the surface and the mechanical properties of the pressed blanks. The present tests were performed under industrial conditions on existing equipment. The results show that increasing the degree of deformation (up to 85%) when pressing rods improves their ultimate strength and relative elongation; the strength does not change for degrees of deformation exceeding 85%. The pressing rate does not affect the mechanical properties of pressed blanks, but it does affect the quality of the surface. Burrs appear at low pressing rates. When the blanks are heated

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ACCESSION NR: AT4012720 S/2981/63/000/002/0105/0110

AUTHOR: Kishnev, P. V.; Perevyazkin, L. S.; Petrova, A. A.; Averkina, N. N.

TITLE: Mechanical properties and structure of forged blanks made of SAP

SOURCE: Alyuminiyevy*ye splavy*. Sbornik statey, no. 2. Spechenny*ye splavy*. Moscow, 1963, 105-110

TOPIC TAGS: powder metallurgy, aluminum powder, sintered powder, sintered aluminum powder, forging, aluminum forging, SAP

ABSTRACT: Due to the increasing requirements for pressed and forged parts made of SAP the necessity arises of investigating the best forging methods. The present study was carried out on grade APS-1 aluminum powder containing 7.1% Al_2O_3. Square (36 x 36 mm) and round (diameter 110 mm) rods were used for forging. The investigation showed that it is possible to use existing equipment for forging parts from sintered aluminum powder. The best combination of strength and relative elongation was obtained at an initial forging temperature of 550C and a final temperature of 360C. The method of forming brickets from the aluminum powder did not influence the mechanical properties of the pressed rods and forged plates. "G. M. Bagnenko and V. I. Sverlov also took part in the work." Orig. art. has: 5 figures and 4 tables.

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S/137/61/000/008/011/037
A060/A101

AUTHORS: Chuyko, N. M., Rutkovskiy, V. B., Perevyazko, A. T., Antipenko, G.I., Babkov, T. M., Kurganov, V. V., Frantsev, V. P.

TITLE: Technique for smelting electric steel involving the treatment of the metal by slags in the ladle

PERIODICAL: Referativnyy zhurnal, Metallurgiya, no. 8, 1961, 36, abstract 8V225 ("Metallurg. i gornorudn. prom-st'. Nauchno-tekhn. sb.", 1960, no. 4, 31-34)

TEXT: A new technique for smelting structural and ball-bearing steels was worked out by the plant "Dneprospetsstal'" and by the Dnepropetrovsk Metallurgical Insitute. The technique provides for the preliminary reduction of the metal by Fe-Mn and Fe-Si or by Si-Mn and the subsequent aftercharging with Fe-Cr. The slag is reduced by ground 75% Fe-Si and coke, the final reduction is carried out by Al bars in the ladle, and the metal is slag-treated on drawing off. The use of the technique in the smelting of various grades of structural and ball-bearing steels in large (55 ton) electric furnaces makes it possible to raise somewhat

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PEREVYAZKO, A.T.; CHUYKO, N.M., Prinimali uchastiye: FRANTSOV, V.P.; DANICHEK, R.Ye.; KARPOV, N.A.; VOROB'YEVA, T.M.; VOLOVICH, Yu.G.; SUN CHEN GUAN

Effect of the technology of smelting, vacuum treatment, and pouring of chromium-aluminum steel on the presence of spotty segregation. Izv.vys.ucheb.zav.; chern.met. 4 no.6:42-52 '61. (MIRA 14:6)

1. Dnepropetrovskiy metallurgicheskiy institut.
(Steel-aluminum alloys—Metallography)
(Vacuum metallurgy)

PEREVYAZKO, A.T., inzh; CHUYKO, N.M., prof.

Effect of the composition of chromium-aluminum steels on the extent of their spotty segregation [with summary in English]. Stal' 21 no.3:267-271 Mr '61. (MIRA 14:6)

1. Dnepropetrovskiy metallurgicheskiy institut.
(Chromium steel--Metallography)
(Steel-aluminum alloys--Metallography)

S/133/61/000/003/012/014
A054/A033

AUTHORS: Pereyyazko, A. T., Engineer; Chuyko, N.M., Professor, Doctor of Technical Sciences

TITLE: The effect of the composition of chrome-aluminum steels on the extent of their spotty liquation

PERIODICAL: Stal', no 3., 1961, 267 - 271

TEXT: Spotty liquation is found in several types of carbon, ball-bearings, structural and other steels but, since the mechanism of the origination of this kind of liquation has not yet been fully investigated, no effective measures are known to prevent it. In the Dneprospetsstal' Plant spotty liquation in 1-ton ingots of 38XMIOA (38KhMYuA) steel reached 6.4. %, in 2.857-ton ingots 18.4 %, in 1959, while in 1958 these figures were 8.6 % and 26.7 %, respectively, The 35 XIOA (35KhYuA) and 38XBIOA (38KhVFYuA) steels are less liable to spotty liquation; the respective figures for 2.857-ton ingots (for 1958) are for the former steel grade: 12.1 % and for the latter: 1.79 %, while in 1959 they were: 12.1 and 4.4 %. It was

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found that spotty liquation develops to a lesser extent in the light-weight ingots of chromium steels, moreover, this defect is more conspicuous in the upper part of the ingot. Table 1 shows that spotty liquation is more pronounced in the 38KhMYuA and occurs under less in the 38KhVFYuA grade steel. As both grades are produced according to the same technology, the difference in the formation of spotty liquation must evidently be put down to the varying aluminum content of these steels: in 38KhMYuA 0.7 - 1.1 %; in 35KhYuA 0.7 - 1.2 %; in 38KhVFYuA 0.4 - 0.7 %. Spotty liquation is also said to be promoted in the 38KhVFYuA steel by tungsten, when present with 0.2 - 0.4 %, and by vanadium (0.1 - 0.2 %), moreover, in the 38KhMYuA steel by molybdenum (0.15 - 0.25 %). This, however, must still be established. Sulfur and phosphorus are elements intensely segregating and enhancing spotty liquation. Their segregation around non-metallic inclusions results in the formation of dark spots. The increase in carbon-content, at an average aluminum-content of 0.9 % furthers spotty liquation as well, while it develops to a less extent when the manganese content of the metal increases, as manganese is apt to form sulfides of a high melting temperature and to impede the liquation of sulfur. Silicium has a similar effect and this can be explained by the increase in the size and the change of

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the character of siliceous (non-metallic) inclusions upon an increased silicium content, due to which they emerge and float more easily, while the decrease in the inter-phase surface on the border of metal and inclusion results in the decrease of liquation. Spotty liquation develops more intensively in the 38KhMYuA and 35KhYuA steels together with the increase in non-metallic inclusions. Their formation and, at the same time, the origination of spotty liquation can be prevented by a thorough deoxidation of the metal with silicium ($\geqslant$0.15 %) and of the slag before alloying with aluminum, as in this case fewer inclusions of finely dispersed aluminum oxide are formed. In order to establish the effect of hydrogen and nitrogen, tests were carried out with various hydrogen (3.4 - 13.0 cm^2/ 100 gr) and nitrogen contents (0.003 - 0.011 %), but they did not effect any change in spotty liquation. Thus, the presence of gases in the metal cannot be regarded as the main cause of spotty liquation, although hydrogen, which generally promotes liquation, may also have some effect on spotty liquation. It was found that as to the technology of smelting, vacuum treatment and pouring spotty liquation developed least a) if rimming is limited to less than one hour, while about 0.5 % carbon is burnt out, at a rate of V_C = 0.60 % [C] /h; b) if the

oxygen content of the metal is low before being alloyed with aluminum. This can be effected by previous deoxidation with coarse silico-manganese or silico-calcium and by a short refining period (not longer than two hours); c) by deoxidizing the slag thoroughly, to a FeO-content of max. 0.5 % during skimming, before aluminum is added to the metal and before tapping the smelt; d) by maintaining the optimum heat conditions during smelting, i.e., the metal temperature should be 1600 - 1630°C at the end of rimming and before tapping; e) when the metal is held long enough in the ladle to bring out non-metallic inclusions. Also the vacuum treatment of the metal decreases spotty liquation; f) when pouring is carried out at an optimum rate (160 -180 sec. for 2.857-ton ingots). As to the mechanism of spotty liquation it was found that it is not identical for all types of steel. In rimming steel spotty liquation is caused by the intense liquation of sulfur, phosphor and carbon, due to gases forming blisters during the crystalization. The so-called gaseous liquation can be observed in steels with an increased gas content, e.g. hydrogen, oxygen or carbonoxides, when the metal is insufficiently deoxidized. In killed steels spotty liquation is caused by finely dispersed, high-melting, non-metallic inclusions, with a highly developed specific sur-

face, which have a tendency to emerge during crystallization, but due to their small dimensions and low flotation rate concentrate in the upper part of the casting, which is therefore affected most by this defect. The development of spotty liquation is also affected by the rate of crystallization and the viscosity of the metal. Light-weight ingots solidify at a high rate, therefore there is relatively less liquation than in heavy ingots having a lower crystallization rate.90 - 98 % of the non-metallic inclusions in chrome aluminum steels consist of finely dispersed (1 - 5μ) aluminum, with a melting temperature of 2040°C. This type of liquation is mostly found in steels alloyed for deoxidized intensively by aluminum. The most effective measures against spotty liquation are: 1) to use metal with the lowest possible sulfur and phosphor content, 2) to keep the gas (hydrogen, oxygen, nitrogen) content of the metal very low, moreover 3) to apply a technology which ensures larger sized inclusions. These measures, however, are not absolutely effective for ingots above 2.8 ton. As already emphasized earlier, when introducing coarse silico-calcium (1 kg/t) or ferrosilicium, the sulfur, phosphor and carbon compounds formed with calcium-silicate are arranged uniformly over the entire volume of the casting, thus impeding liquation. The preliminary deoxidation of chrome-

-aluminum steels with the above mentioned agents has been introduced by the Dneprostal' Plant. The recommendation is given to extend the tests by applying cerium, lantane and other rare earth metals. In the tests the following members of the Dneprospetsstal' staff took part: V. P. Frantsov, R. Ye. Danichek, N. A. Karpov, T. M. Vorob'yeva, Yu. G. Volovich and partly: Sun Chen-guan. There are 5 figures, 1 table and 19 Soviet references.

ASSOCIATION: Dnepropetrovskiy metallurgicheskiy institut (Dnepropetrovsk Institute of Metallurgy).

Table 1: ① Conventional quality class; ② Weight of ingot, t ③ 1.0; ④ 2.857; ⑤ Steel grades (in brackets: the number of heats); ⑥ KhMYuA (93); ⑦ 38KhMYuA (178); ⑧ 35KhYuA (95); ⑨ 38KhVFYuA(50); ⑩ Number of serviceable castings, %.

ТАБЛ. 1 ① Условный балл по пятибалльной шкале	② Вес слитка, т			
	③ 1,0		④ 2,857	
	⑤ Марка стали (в скобках—количество плавок)			
	38ХМЮА (93)	38ХМЮА (178)	35ХЮА (95)	38ХВФЮА (50)
	⑩ Количество соответствующих плавок, %			
0	46,3	5,0	33,4	65,0
1	45,2	36,5	35,6	23,3
2	4,9	32,0	18,2	7,0
3	1,2	23,3	9,6	4,7
4	2,4	3,2	3,2	0,0

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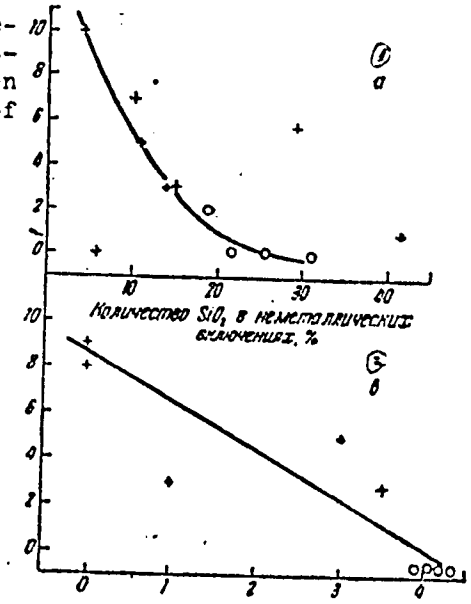
Figure 5: Dependence between the defectiveness of chrome-aluminum steels due to spotty liquation on the silicium content in non-metallic inclusions (1) and on the size of globular inclusions (2). The castings to which calcium silicate was added are indicated with circles and those without calcium silicate-with crosses.

Vertical legend: amount of reject rods in the heat;
Horizontal legend: amount of SiO_2 in the non-metallic inclusions, %; size of globules, quality class.



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S/148/61/000/006/002/013
E193/E480

AUTHORS: Perevyazko, A.T. and Chuyko, N.M.

TITLE: The influence of melting, vacuum treating and teeming technique on the occurrence of spot segregation in chromium aluminium steels

PERIODICAL: Izvestiya vysshikh uchebnykh zavedeniy, Chernaya metallurgiya, 1961, No.6, pp.42-52

TEXT: Causes of the appearance of spot segregation in chromium-aluminium steels and methods of its prevention were investigated. The investigation consisted of a statistical analysis of data for 130 heats of steel 38ХМЮА (38KhMYuA), 416 heats of steels 38KhMYuA, 35ХЮА (35KhYuA) and 38ХВФЮА (38KhVFYuA) produced in two different works during 1957-59 and of 36 experimental heats of steels 38KhMYuA and 35KhYuA in which various modifications of melting technique were tried (no details given). It was established that an increased content of sulphur, phosphorus and carbon increases and of manganese, silicon and calcium decreases the appearance of spot segregation. For example, increasing sulphur content from under 0.007% to above 0.01% increased the percentage of defective rods from 19.8 to 28.7%. An increase of

manganese content from less than 0.42% to over 0.47% and of silicon content from the 0.17 - 0.23% range to a 0.31 - 0.37% range decrease the percentage of affected rods from 37.6 to 27.8% and from 37.1 to 29.8% respectively. The content of gases (hydrogen and nitrogen) within the limits encountered (hydrogen from 3.4 to 13 $cm^3/100$ g; nitrogen 0.003 to 0.011%) had no effect on the appearance of the defect. It was established that the main cause of the appearance of spot segregation is an increased content of non-metallic inclusions, particularly finely dispersed alumina. A decrease in the amount of non-metallic inclusions, as well as a change in their composition by replacing alumina with silica which aids the formation of larger globular inclusions assists in decreasing the appearance of the defect. Vacuum treatment of metal in the ladle has little effect on the content of hydrogen and nitrogen in the metal, but a prolonged retention of the metal in the ladle, as well as stirring of the upper layers of the metal with slag helps in the flotation of non-metallic inclusions and thus reduces the appearance of spot segregation. Vacuum treatment of a stream of metal on pouring from one ladle to another decreases the

content of hydrogen and nitrogen in steel. However, at a high residual pressure (above 10 mm Hg) the metal is additionally oxidized during pouring and the degree of contamination by oxide inclusions increases, which in turn promotes spot segregation. In order to obtain high quality metal by this method, the residual pressure should not exceed 1 mm Hg. The mechanism of the formation of spot segregation is explained by the concentration of surface active sulphur, phosphorus and carbon on the boundary surfaces between phases (liquid metal-gas bubble, or liquid metal-non-metallic inclusion) tending to decrease the interphase tensions. In steels 38KhMYuA, 35KhYuA and 38KhVFYuA non-metallic inclusions consist of 90 to 98% of refractory alumina (particle size 1 to 5 μ, melt temperature = 2040°C) due to which these steels are particularly prone to spot segregation. In order to prevent spot segregation in steels, it is necessary to obtain metal with as low as possible content of segregating admixtures (S, P) and gases (hydrogen, nitrogen) and with a low oxygen content, as well as to modify the de-oxidation practice so as to increase the particle size of non-metallic inclusions. On the basis of experimental

heats, a technology of melting chromium-aluminium steels was developed, the main points of which are as follows:
1) A short (not exceeding 1 hour) but intensive oxidizing period (rate of decarburization above 0.6% C/hr, at a concentration of carbon [ΔC] = 0.50 to 0.60%). The metal temperature at the end of boiling should be within a range 1600 to 1630°C.
2) After drawing off the oxidizing slag, 1 kg/t of lump 45% ferrosilicon and 1 kg/t of lump silicocalcium is charged on to the clear surface of the metal and a fresh slag is made which is deoxidized with coke mixed with lime and powdered 75% ferrosilicon. Before alloying with aluminium, the metal should be well deoxidized and contain above 0.15% of silicon. The content of ferrous oxide in the slag before aluminium addition should not exceed 1.0%. The duration of refining is 1 hr 20 min to 1 hr 40 min.
3) The metal should be retained for not less than 11 to 12 minutes (vacuum treatment of the metal in the ladle is not a necessity).
From 1960, this technique has been used for melting 35KhYuA and 38KhVFYuA steels in the works (not specified). A comparison of the proportion of rods affected by spot segregation made from the metal produced by the old and new technique is given: steels

35KhYuA old technology 12.1%, new technology 0.6 and 0.47%. It is pointed out that additions of silicocalcium in lumps have a particularly beneficial effect in decreasing rejects due to spot segregation. Moreover, the metal becomes less anisotropic (the ratio of impact strength of transverse and longitudinal specimens increased from 0.50 - 0.63 to 0.81 - 0.89). V.P.Frantsov, R.Ye.Danichek, N.A.Karpov, T.M.Vorob'yeva, Yu.G.Volovich and Sung Cheng Kuang participated in the work. There are 6 figures, 8 tables and 14 Soviet references.

ASSOCIATION: Dnepropetrovskiy metallurgicheskiy institut
(Dnepropetrovsk Metallurgical Institute)

SUBMITTED: November 15, 1960

FEREVYAZHC, S. I.

"Continous System of Mining Unsuitable for Many Donbass Mines"
Mekh Trud i Tyazh Rabot Jan 195. W-4514

PEREVYAZKO, S. I.

"Continuous System of Mining Unsuitable for many Donbass Mines," Mekhanizatsiya Trudoyemkikh i Tyazhelykh Rabot, No. 1, 1952.

Translation W-22512, 24 Apr 52

PEREVYAZKO, V., starshiy prepodavatel'

Improving workers' qualifications and labor productivity.
Sots. trud 8 no.2:103-107 F '63. (MIRA 16:2)

1. Zaporozhskiy pedagogicheskiy institut.
(Zaporozh'ye—Iron and steel workers—Education and training)

PEREY, Lajos

Rapid construction of a double-walled drinking water reservoir.
Vizugyi kozl no.1:180-183 '60.

PEREYASLAVTSEV, Nikolay Aleksandrovich, inzh.; KISILIYER, Markus Isaakovich, inzh.; ANTONOVA, N.N., inzh., red.

[Instrument for percussion and rotary drilling of holes in reinforced concrete; materials of the Kiev section of the All-Union State Design Institute "Teploelektroproekt"] Instrument dlia udarno-povorotnogo bureniia otverstii v zhelezobetone; po materialam Kievskogo otdeleniia VPGI "Teploelektroproekt." Moskva, Stroiizdat, 1964. 15 p. (MIRA 18:5)

1. Kiyevskoye otdeleniye Vsesoyuznogo gosudarstvennogo proyektnogo instituta stroitel'stva elektrostantsiy (for Pereyaslavtsev). 2. Rukovoditel' stroitel'noy gruppy Kiyevskogo otdeleniya Vsesoyuznogo gosudarstvennogo proyektnogo instituta stroitel'stva elektrostantsiy (for Kisiliyer).

ATAMASENKO, G.N., inzh.; PEREYASLAVTSEV, N.A., inzh.; FISHKIS, M.S., inzh.

Precast reinforced concrete foundations for the auxiliary equipment of thermal electric power plants. Energ. stroi. no.41:7-10 '64. (MIRA 17:11)

USSR/Farm Animals. Horses.

Abs Jour: Ref Zhur-Biol., No 20, 1958, 92510.

Author : Pereyaslavskiy, I.K.
Inst : Kharkov Zootechnical Institute.
Title : Some Data on Intrauterine Growth and Development of Horses.

Orig Pub: Sb. tr. Khar'kovsk. zooteknn. in-t, 1957, 9, 207-213.

Abstract: It was ascertained on the basis of experiments that the weight of the foetus in horses at the age of 3 months is .05 kg (or .1% of the weight of the foal at birth), at the age of 7 months - 12.1 kg (or 27.5%), at the age of 10 months - 29.0 kg (or 65.9%) and at the moment or birth 44.0 kg (100%). The highest daily average increase in weight of the foetus (364.1 g) was

Card : 1/2

PEREYASLAVSKIY, I. K. Cand Agr Sci -- (diss) "On certain laws of the intra-uterine growth and development of horses." Khar'kov, 1957. 17 pp (Min of Agr USSR. Khar'kov Zootech. ~~Zooengineering~~ Inst), 125 copies (KL, 3-58, 98)

PEREYASLAVSKIY, I. K.

USSR/General Biology - Individual Development. B-4

Abs Jour : Ref Zhur - Biol., No 7, 1958, 28530

Author : Pereyaslavskiy, I.K.
Inst : -
Title : Changes in Length and Weight of Some Horse Bones in the Uterine Period of Development (Preliminary Communication).

Orig Pub : Sb. tr. Kharkovsk. zootekhn. in-t, 1956, 8, 121-130

Abstract : A study was conducted of changes in length and weight of the metacarpal, radius, humerus, and shoulder blade, as well as the metatarsal, tibia and femoral bones in horse fetuses. A relatively greater intensity of linear and weight growth was established for self-propulsive bones (metacarpal and metatarsal bones) and relatively stable growth intensity of bone cystopodium. The relative intensity of weight change is constant for radius bone, and the tibia shows a tendency to diminish in weight.

Card 1/2

14

AL'TSHULER, M.A. inzhener; BORZENKO, P.V., inzhener; [redacted], inzhener.

Improving hard ore mining. Bezop. truda v prom. 1 no.4:15-18 Ap '57.
(Mining engineering) (MLRA 10:6)

PEREYASLAVSKIY, Yevgeniy.

We are building a house (conclusion). IUn.tekh. no.6:72-74 Je '57.
(MIRA 10:7)

(Building)

PEREYASLAVTSEV, N.A., inzh.

Precast reinforced concrete construction elements of the Simferopol' State-Owned Regional Electric Power Plant. Energ.stroi. no.15:3-7 '59. (MIRA 13:8)

1. Kiyevskoye otdeleniye instituta "Teploelektroproyekt".
(Simferopol'--Electric power plants)
(Precast concrete construction)

KISILIYER, M.I., inzh.; PEREYASLAVTSEV, N.A.

Stressed precast reinforced concrete girders with tubular asbestos-cement elements. Energ.stroi. no.15:8-12 '59. (MIRA 13:8)
(Simferopol'--Electric power plants)
(Girders)

KALINOVSKIY, V.I., inzh.; KISILIYER, M.I., inzh.; PEREYASLAVTSEV, N.A., inzh.

Precast reinforced concrete trestles of fuel-feed arrangements. Energ.stroi. no.15:17-20 '59. (MIRA 13:8)

1. Kiyevskoye otdeleniye instituta "Teploelektroproyekt."
(Precast concrete construction)
(Trestles)

PEREYASLAVTSEV, N.A.

U.S.S.R.

2939. New design of outdoor pipelines for hydraulic ash removal. N. A. PEREYASLAVTSEV AND S. A. RIVKIN. *Elekt. Stantsii*, 1954, No. 9, 26-9. In Russian.

The new design avoids expansion glands, the thermal expansion being taken up by lateral deflection at the angle points of the suspended zig-zag line. Details of the static calculation are discussed. Longitudinal forces due to thermal expansion are smaller than with the conventional design and do not exceed [illegible]. Design and erection are simplified by the use of standard supports.

F. BUSEMANN

PEREYASLAVTSEV, N.A.

USSR

2519. NEW OVERHEAD SYSTEM OF HYDRAULIC ASH REMOVAL. Pereyaslavtsev, N.A. and Rivkin, B.A. (Elekt. Sta. (Pwr Sta., Moscow), Sept. 1954, Vol. 25, [illegible]). In the system of ash removal by hydraulic means through overhead piping the latter is freely suspended from T-shaped supports, rigid attachment being necessary only at the ends of the line. The system is more economical than existing systems using rigid supports and expansion pieces. Poles may be of wood, metal, or concrete.

PEREYASLAVTSEV, N.A., inzh.; KISILIYEV, M.I., inzh.; ANTONOVA, N.N., inzh., red.

[SMP-4 construction and assembly gun] Stroitel'no-montazhnyi pistolet SMP-4. Moskva, Stroiizdat, 196[illegible]. 15 p. (MIRA 18:11)

PEREYASLAVTSEV, N.A., inzh.

Joints of precast reinforced concrete elements in thermal electric plants. Energ. stroi. no.20:70-72 '61. (MIR 15:1)

1. Kiyevskoye otdeleniye instituta "Teploelektroproyekt".
(Electric power plants--Precast concrete construction)

PEREYASLAVTSEV, N.A., inzh.

The question of precast construction. Energ. stroi. no.22:3-6 '61. (MIRA 15:7)

1. Kiyevskoye otdeleniye Vsesoyuznogo gosudarstvennogo proyektnogo instituta po proyektirovaniyu elektrooborudovaniya teplotekhnicheskikh sooruzheniy.
(Electric power plants)
(Precast concrete construction)

SOV/97-58-12-3/13

AUTHORS: Yarin, V.N., Member of ASiA Ukrainian SSR, Professor; Rivkin, S.A., Candidate of Technical Sciences; and Korshunov, D.A., Pereyaslavtsev, N.A. and Kisiliyer, M.I., Engineers.

TITLE: Use of Precast Large-Block Reinforced Concrete Foundations Under Columns of the Main Building of Simferopol' GRES (Opyt primeneniya sbornykh krupnoblochnykh zhelezobetonnykh fundamentov pod kolonny glavnogo korpusa Simferopol'skoy GRES).

PERIODICAL: Beton i Zhelezobeton, 1958, Nr.12, pp.449-453 (USSR)

ABSTRACT: Engineers N.A. Pereyaslavtsev and M.I. Kisilier, of the Kiyev Branch of Teploelektroproyekt, designed a new type of precast large-block reinforced concrete foundation as illustrated in Fig.1. These new foundation slabs were tested by the Kiyev Structural Engineering Institute (Kiyevskiy inzhenerno-stroitel'nyy institut), Kiyev Branch of Teploelektroproyekt and by Yuzhenergostroy (Engineers I.F. Pishchik, Yu.A. Vol'ters and S.K. Przhiyalgovskiy). The foundation blocks were

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Use of Precast Large-Block Reinforced Concrete Foundations Under Columns of the Main Building of Simferopol' GRES.

designed to carry 500 t positioned centrally: they measure 5.2 x 3.5 m and weigh 15.7 t. The weight of the saddle is 10.6 t. Concrete of mark 300 was used, with reinforcement from hot rolled steel of standard profile mark 25G2S. Fig.2 illustrates the points which were taken into account in testing. The foundations were tested by a load gradually increasing by 0.5-1 kg/cm^2, up to the breaking limit. Table 1 gives values obtained during testing: Fig. 3 illustrates the character of cracks which appeared, and Fig.4 shows the deformation of the foundation slab. Fig. 5 illustrates the method on which the calculation of the foundation is based: formula for the bending moment of the loaded foundation is presented and explained. The calculation of the foundation for shear stresses is carried out according to NiTU 123-55. The following recommendations are given for the construction of precast foundations: the concrete should not be of lower mark than 200; to save steel the size of the saddle should be bigger; account should be taken of the shear stresses, and the necessity for stirrups and

Use of Precast Large-Block Reinforced Concrete Foundations Under Columns of the Main Building of Simferopol' GRES.

bends obviated; the recess in the foundation housing the beam should have walls not less than 300 mm thick; the reinforcement of the slab should be carried through the whole of its length, as should also the reinforcement of the saddle. The results of the above tests were taken into account in designing the precast large-block reinforced concrete construction under the columns of the Simferopol' GRES (see Fig.6). Assembly was carried out by the Donbassenergostroy of the Ministry of Building of the Ukrainian SSR (Ministerstvo stroitel'stva USSR). The foundations were produced by the "Stroydetal'" factory. Assembly was carried out by cranes BK-403 and BK-405, of 40 t capacity. Assembly of 70 foundation slabs with a total volume of 1066 m^3 of reinforced concrete was carried out in 15 days. Table 2 gives values indicating labour requirements. There are 6 figures and 2 tables.

SHISHOV, V.V., inzh.; PEREYASLAVTSEV, N.A., inzh.

Construction of state district power plants using precast reinforced concrete. Elek.sta. 29 no.1:40-46 Ja '58. (MIRA 11:2)

(Electric power plants)
(Precast concrete construction)

PERMYASLAVTSEV, N.A., inzhener; RIVKIN, S.A., kandidat tekhnicheskikh nauk.

New system of aerial lines for hydraulic cinder removal. Mekh.sta. 25 no.9:26-29 '54. (MLRA 7:9)
(Ash disposal)

PEREYASLOV, A.; MANUYLOV, A.

Outdoor storage of grain in areas of virgin and waste lands under reclamation in Kazakhstan. Muk.-elev. prom. 24 no.8: 4-5 Ag '58. (MIRA 11:10)

1. Ministerstvo khleboproduktov KazSSR.
(Kazakhstan--Grain--Storage)

PERSIYASLOV, A.

Grain storage bin made of nylon at the Kustanay Grain Elevator.
Muk. elev. prom. 24 no.11:11 N '58. (MIRA 11:12)

1.Upravleniye priyema i razmeshcheniya khleba i sena Ministerstva khleboproduktov Kazakhskoy SSR.
(Kustanay--Grain elevators)

ACC NR: AP7006291 (A) SOURCE CODE: UR/0437/66/000/010/0026/0028

AUTHOR: Krykh, B. V.; Panov, G. L.; Pereyaslov, A. N.; Yefimov, N. M.

ORG: UkrNIGRI

TITLE: An autoclave for setting cement at high temperatures and pressures

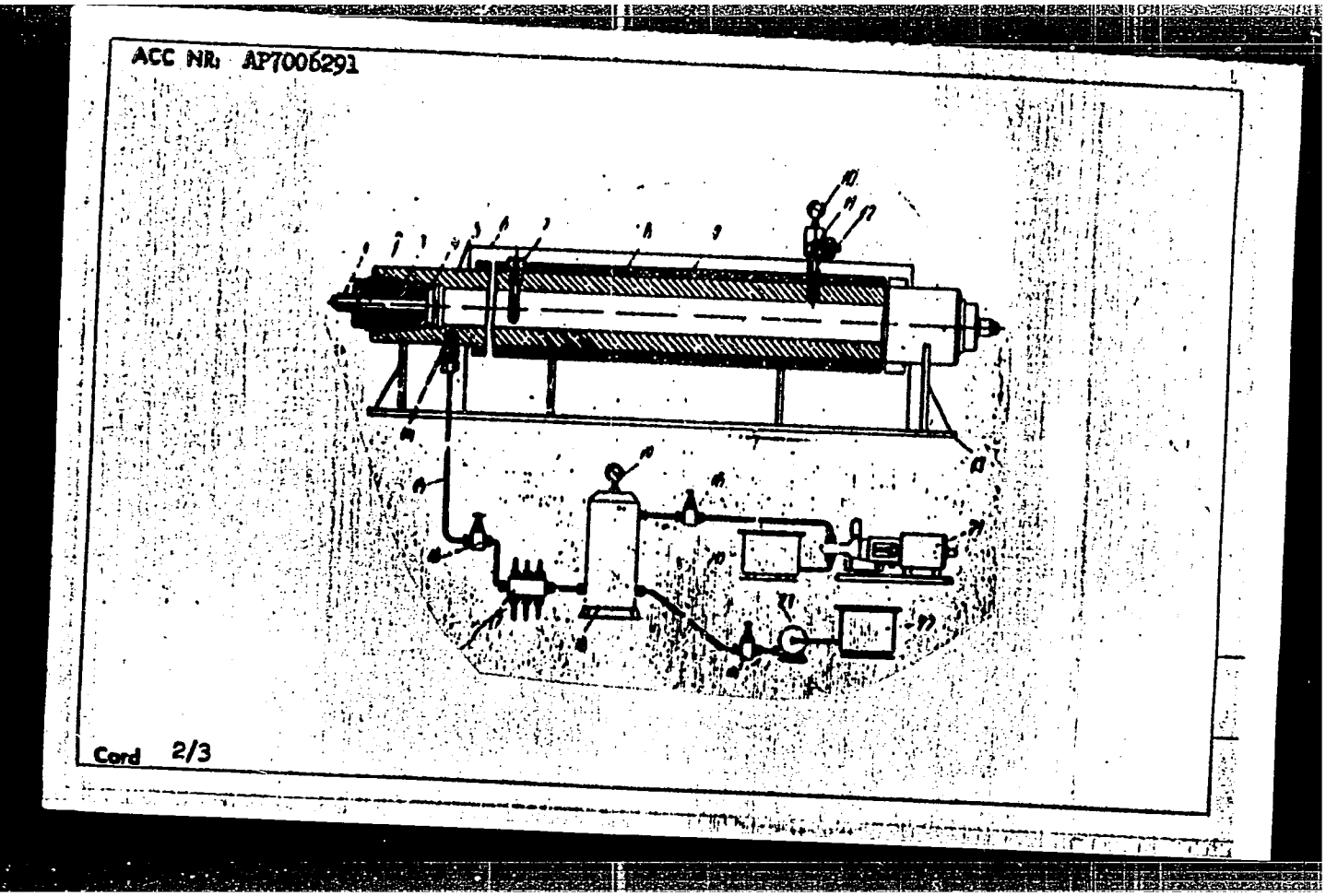
SOURCE: Bureniye, no. 10, 1966, 26-28

TOPIC TAGS: cement, petroleum engineering, test facility, pressure effect, high temperature ~~effect~~ research

ABSTRACT: The authors describe a large autoclave designed for studying the physical and chemical properties of cement after setting under the conditions which exist in deep gas and oil wells. A diagram of the autoclave and its hydraulic system is shown in the figure. The unit consists of casing 5 which is 1800 mm long with an outside diameter of 178 mm and an inside diameter of 90 mm. Plugs 3 with tapered threads are screwed into both ends of the casing. Inside each plug is a rod 2 with support plates. An elastic sealing ring 4 is located between the support plate and the face of the plug. Tension on nut 1 compresses the seal sufficiently for holding the starting pressure. As the pressure increases, the plate compresses the ring further to provide reliable sealing. A thermometer bulb 7 and manometer tube 11 are threaded into the top of the casing. Installed in the manometer tube is a needle valve 12 for releasing air from the autoclave as it is filled with water. Pump 23 is used for filling and pump

Card 1/3

UDC: 622.245



ACC NR: AP7006291

21 is used for pressurizing. The heater consists of two nichrome coils 8 wound around the casing of the autoclave in asbestos liner 9. The casing of the autoclave is enclosed in jacket 6. The space between the jacket and the casing is filled with a heat insulating material. The electrical circuit of the autoclave is described. The unit accommodates three girder specimens measuring 40×40×160 mm or three cubic specimens measuring 50×50×50 mm. A pressure of 1300 atm may be set up at a temperature of 20°C. Orig. art. has: 2 figures.

SUB CODE: 13, 11/ SUBM DATE: None

Card 3/3

SEMENOV, I.G.; PEREYASLOV, N.I.

Turning screen for screening high-alumina powders. Stek.i ker. 19 no.11:36-37 N '62. (MIRA 15:12)
(Screens (Mining))

PEREYASLOV, V.

The show window is the face of a store. Sov. torg. 34 no. 1:58-60 Ja '61. (MIRA 14:1)

1. Glavnyy khudozhnik moskovskogo TSentral'nogo universal'nogo magazina.

(Show windows)

PEREYASLOVA, D. G.

5

The product of reduction of 6-nitrodiphenic acid. B. M. Kmsvitskii, D. G. Pereyaslova, and N. K. Kobyak (Kharkov State Univ.). *Ukrain. Khim. Zhur.* 18, 97–101 (1952)(in Russian); cf. Schmidt and Hampl, *Ber.* 36, 3738(1903).—When 6-nitrodiphenic acid is reduced according to S. and K. the resulting product m. 265°, and not higher as reported by them. The material cannot be diazotized and is not 6-aminodiphenic acid, but *phenanthridone-1-carboxylic acid* (I). The *Ag salt* was analyzed and the result corresponds to this structure; HNO_2 regenerates the original acid. I prepd. from HN_3 and fluorenone-4-oxylic acid has properties identical with the above. When 6-nitrodiphenic acid is reduced with $Na_2S_2O_4$, the product, m. 327°, forms a Ag salt having the compn. of I Ag salt; possibly another isomer of I is formed in this instance.

G. M. Kosolapoff

(2)

PEREYASLOVA, D.G

USSR

Influence of steric factors on properties of dyes containing biphenyl rings. I. Bis-azo dyes from benzidine and from its 2-mono- and 2,2'- and 3,3'-disubstituted derivatives. B. M. Krasovitskii and D. G. Pereyaslova (A. M. Gor'kii State Univ., Kharkov). *Ukrain. Khim. Zhur.* 20, 646–60(1954)(in Russian); cf. Merkel and Wiegand, *C.A.* 43, 942e.—Results of this study of the effect of various substituents on the depth of shade and substantivity of these bis-azo dyes (I) corroborate the previously made statement relating the substantivity of I with the planarity of their mols. It is postulated that in aq. solns. the mols. of dyes prepd. from benzidine and its 3,3'-disubstituted derivs. are not coplanar, but tend to become so during fixation in the fiber. I contg. in 2,2'-position F, OH, or OMe, give deep shades on the fiber, the first two being more substantive than those having bulkier substituents in *o,o'*-positions to biphenyl bond. Dyes prepd. from 2-mono- in aq. soln. give almost as deep a shade as those from 3,3'-disubstituted derivs. Dyed on cellophane, they markedly deepen the shade, thus leading to an assumption that they are planar or almost planar when on the fiber. Max. absorption spectra, mol. extinction, and substantivity are given.

Elisabeth Barnbush

PEREYASLOVA, D.G.

USSR/ Chemistry - Dyes

Card 1/1 : Pub. 22 - 18/44

Authors : Krasovitskiy, B. M., and Pereyaslova, D. G.

Title : About the effect of spatial structure on the color of benzidine bisazodyes

Periodical : Dok. AN SSSR 98/1, 71-74, Sep 1 1954

Abstract : Various 3,3'-, 2,2'- and 2-substituted benzidine dyes, were investigated to determine the effect of spatial structure on the color of these bisazo-benzidine dyes. The position of the biphenyl nucleus was replaced by different electro-donor and electro-acceptor substitutes for better estimation of the absorption maximum. Data on the non-plane structure of dyes derived from non-substituted benzidine and its 3,3'-di-substitutes with the biphenyl nucleus as a base are included. Thirteen references: 7-USSR; 3-USA; 2-German and 1-Scandinavian (1930-1953). Tables.

Institution : The A. M. Gorkiy State University, Kharkov

Presented by : Academician B. A. Kazanskiy, May 13, 1954

PEREYASLOVA, D.G.

USSR/Organic Chemistry - Synthetic Organic Chemistry, E-2

Abst Journal: Referat Zhur - Khimiya, No 19, 1956, 61502

Author: Krasovitskiy, B. M., Pereyaslova, D. G.

Institution: None

Title: Influence of Steric Factors on Properties of Dyes Containing the Biphenyl Nucleus. 2. Investigation of Bis-Azodyes. Derivatives of Biphenyl, Fluorene, Fluorenone, Carbazole and Phenanthrene Quinone

Original Periodical: Ukr. khim. zh.,.1955, 21, No 1, 71-75

Abstract: Investigation of the influence of the structure of the third ring formed on bridging bond formation between 2,2'-positions of benzidine (I) or diphenylene (II), as concerns the color and substantive dye properties of disazo dyestuffs produced from such condensed diaminos. There is presented a determination and comparison of absorption spectra and substantiveness of dyestuffs from 1,2-methylbenzidine (III), 2,7-diamino fluorene (IV), 2,7-diamino-

Card 1/2

PEREYASLOVA, D. G.

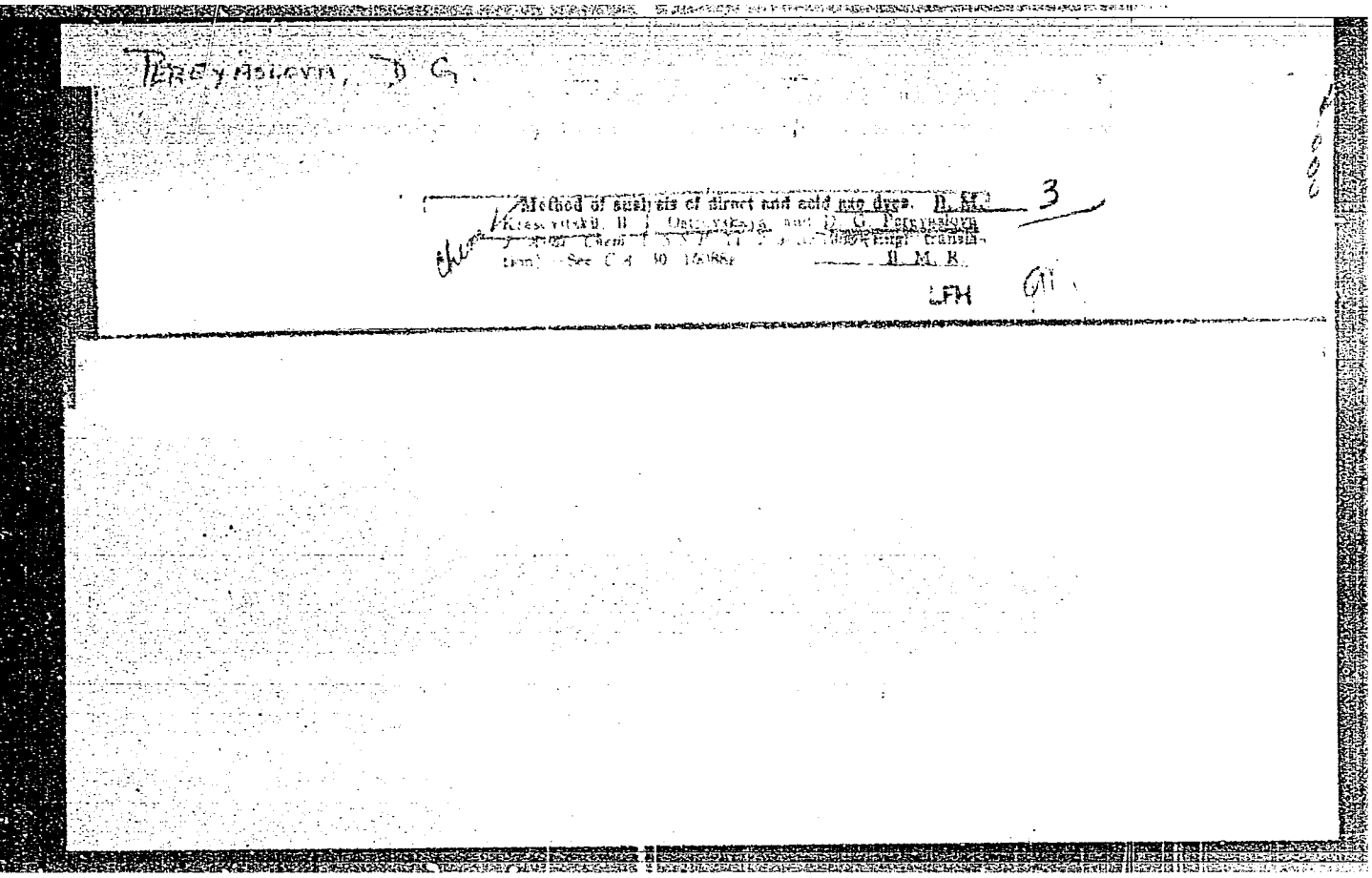
The effect of steric factors on the properties of dyes containing the biphenyl nucleus. III. Investigation of the bisazo dyes, derivatives of biphenyl, phenanthrene, phenazone, and phenanthridone. B. M. Krasovitskil, D. G. Pereyaslova, O. D. Kovalenko, and L. I. Shcherbakova (A. M. Gor'kil State Univ., Kharkov). *Ukrain. Khim. Zhur.* 21, 614-18(1955)(in Russian); cf. *C.A.* 49, 9614g.—Dyes from 2,7-diaminophenanthrene and 2,7-diaminophenazone differ little from each other and from the 2,7-diaminophenanthrenequinone, but are more highly colored than the 2,7-diaminofluorene (I) and the 2,7-diaminocarbazole (II) dyes. They are nearly as substantive as I dyes, and more highly substantive than II dyes. The 2,7-phenanthridone dyes differ little in coloration depth and substantivity from the corresponding benzidine dyes, but are considerably deeper colored and more substantive than the 3,3'-diaminobenzanilide dyes. The 2,4,4'-triaminobiphenyl dyes are considerably less substantive and more highly colored than benzidine dyes because of steric hindrance, and occupy an intermediate position between the benzidine and biphenylene dyes. W. M. Sternberg

(4)

PEREYASLOVA, D. G.

3092. Analysis of direct and acid azo dyes. B. M. Krasovitskii, B. Ostrovskaya and D. G. Pereyaslova (A. M. Gorki Kharkov State Univ.). chem 3

Zhur. Anal. Khim., 1956, 11 (2), 216-219.—The benzidine method of determining direct and azo dyes (Bogoslovskii, *Tekstil. Prom.* 1953, 4, 31) is modified by the introduction of potentiometric titration with $NaNO_2$ of the excess of benzidine. The sample (0·05 to 0·1 g) of dye is dissolved in 15 to 30 ml of water and the soln. at 50° C is treated with twice the theoretical amount of 0·1 *N* benzidine hydrochloride. The pptd. salt is filtered off and the filtrate is diluted to 100 ml in a calibrated flask. A suitable aliquot of the soln. is titrated with 0·01 *N* $NaNO_2$ by the method of Litvanenko *et al.* (*Anal. Abstr.*, 1950, 3, 1069). The method is applicable to the determination of all sulpho dyes that give water-insol. benzidine salts. Titration of the excess of benzidine hydrochloride with NaOH soln. in the presence of phenolphthalein is unsatisfactory because of the colour of the soln. G. S. Smith



Pereyaslova, D. G.

Chem

Relation between color and substantivity of dyes; derivatives of benzanilide. B. M. Krasovitskii, B. I. Ostrovskaya, and D. G. Pereyaslova. *Proc. Acad. Sci. U.S.S.R., Sect. Chem.* 105, 75-78(1955)(English translation).—See C.A. 50, 9031h. B. M. R.

3

Pereyaslova, D. G.

USSR/ Chemistry - Dyes

Card 1/2 Pub. 22 - 19/43

Authors : Krasovitskiy, B. M.; Ostrovskaya, B. I.; and Pereyaslova, D. G.

Title : Relation between structure, color and substantiveness of benzanilide dyes

Periodical : Dok. AN SSSR 106/1, 72-75, Jan 1, 1956

Abstract : The relation between the structure, color and substantiveness of benzanilide dyes was investigated. The increase in the color and drop in substantiveness of these dyes due to the absence of conjugated double bond chains in their molecules, are discussed. The possibility that the structure of the dyes is less favorable for the formation of hydrogen bonds between the auxochromes of the dyes and cellulose is analyzed. It

Institution : Kharkov State University im. A. M. Gorkiy

Presented by: Academician B. A. Kazanskiy, July 15, 1955

Card 2/2 Pub. 22 - 19/43

Periodical : Dok. AN SSSR 106/1, 72-75, Jan 1, 1956

Abstract : was found that the reaction between benzanilide dyes results in formation of hydrogen bonds not only between cellulose and auxochrome but also between cellulose and the amide group of the dye. The effect of the axo-group on the substantiveness of the dye is explained. Nine references: 4 USSR, 3 Germ., 1 USA and 1 French (1914-1954). Tables.

KRASOVITSKIY, B.M.; PEREYASLOVA, D.G.; SEROVA, T.A.

Effect of steric factors on properties of dyes containing the biphenyl nucleus. Part 10: Absorption maxima of some azo dyes. Uch. zap. KHGU 82:149-152 '57. (MIRA 12:9)
(Azo dyes)(Absorption of light)

YAGUPOL'SKIY, L.M.; KRASOVITSKIY, B.M.; BLINOV, V.A.; SIDNEVA, K.M.; PEREYASLOVA, D.G.

Properties of some fluorine-containing azo dyes. Zhur.prikl. khim. 33 no.7:389-392 Jl '60. (MIRA 13:7)

1. Institut organicheskoy khimii AN USSR. Khar'kovskiy gosudarstvennyy universitet. Nauchno-issledovatel'skiy institut organicheskikh poluproduktov i krasiteley.
(Azo dyes)

KRASOVITSKIY, B.M.; PEREYASLOVA, D.G.

Synthesis of 2, 2'-substituted benzidine. Zhur.VKHO 6 no.4:466 '61.
(MIRA 14:7)

1. Khar'kovskiy gosudarstvennyy universitet.
(Benzidine)

L 15321-66 EWT(m)/EWP(j) RM

ACC NR: AP6000944 SOURCE CODE: UR/0286/65/000/022/0029/0029

AUTHORS: Krasovitskiy, B. M.; Shevchenko, E. A.; Pereyaslova, D. G.

ORG: none

TITLE: A method for obtaining phosphorogen. Class 12, No. 176299 [announced by All-Union Scientific Research Institute for Single Crystals (Vsesoyuznyy nauchno-issledovatel'skiy institut monokristallov)]

SOURCE: Byulleten' izobreteniy i tovarnykh znakov, no. 22, 1965, 29

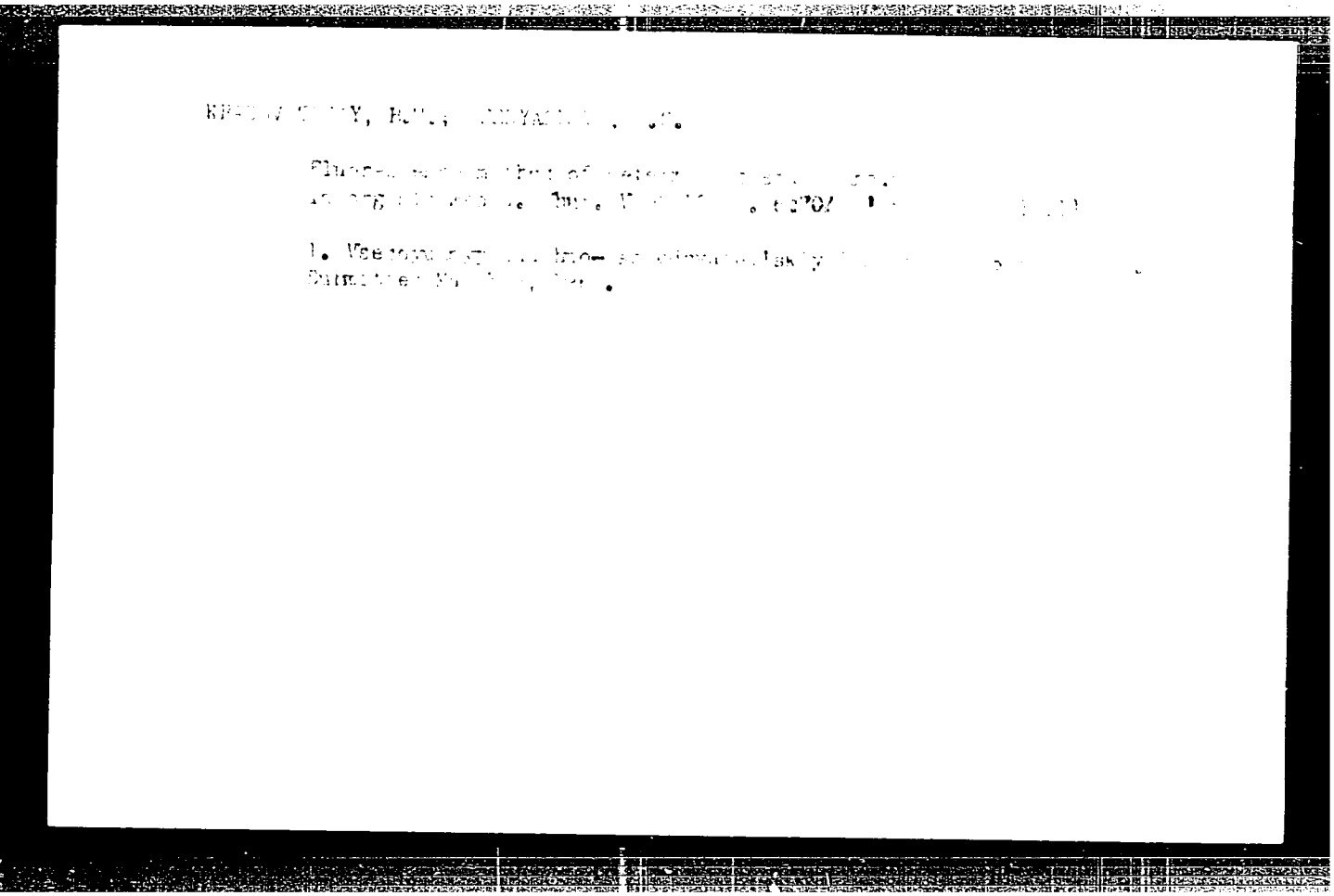
TOPIC TAGS: crystal phosphor, phosphorescent material, phosphorescence, luminophor

ABSTRACT: This Author Certificate presents a method for obtaining a phosphorogen derived from 1,8 naphthoylene-1',2' benzimidazol. To increase the variety of phosphorogens with fluorescence in the yellow-green spectral region, naphthalene anhydride or its derivatives are condensed with corresponding phenylenediamine derivatives.

SUB CODE: 07/ SUBM DATE: 02Jan65

Card 1/1

UDC: 547.785.5.07.:621.3.032.35



L 5294-66 EWT(m)/EWP(j)/EWG(v) RM
ACC NR: AP5024998 SOURCE CODE: UR/0286/65/000/016/0061/0062

AUTHORS: Krasovitskiy, B. M.; Pereyaslova, D. G.; Fodiman, I. V.; Tatsiy, G. V.

ORG: none

TITLE: A method for obtaining daylight fluorescent pigments. Class 22, No. 173867 [announced by All-Union Scientific Research Institute of Single Crystals (Vsesoyuznyy nauchno-issledovatel'skiy institut monokristallov)]

SOURCE: Byulleten' izobreteniy i tovarnykh znakov, no. 16, 1965, 61-62

TOPIC TAGS: pigment, dye, resin, single crystal, n toluolsulfamide, melamine, formaldehyde

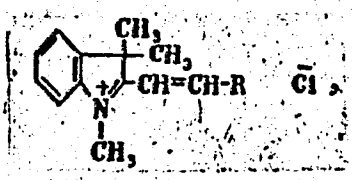
ABSTRACT: This Author Certificate presents a method for obtaining daylight fluorescent pigments based on a resin of n-toluolsulfamide, melamine, and formaldehyde, to which a dye is added. To increase the fastness of colors in daylight, cation pigments are used as dyes. Their general formula is:

Card 1/2 UDC: 666.291.3:668.819.45

29010541

L 5294-66

ACC NR: AP5024998



where R is an aromatic or a heterocyclic radical. A luminophor may be added to the dye.

SUB CODE: MT, GC/ SUBM DATE: 07Sep64/ ORIG REF: 000/ OTH REF: 000

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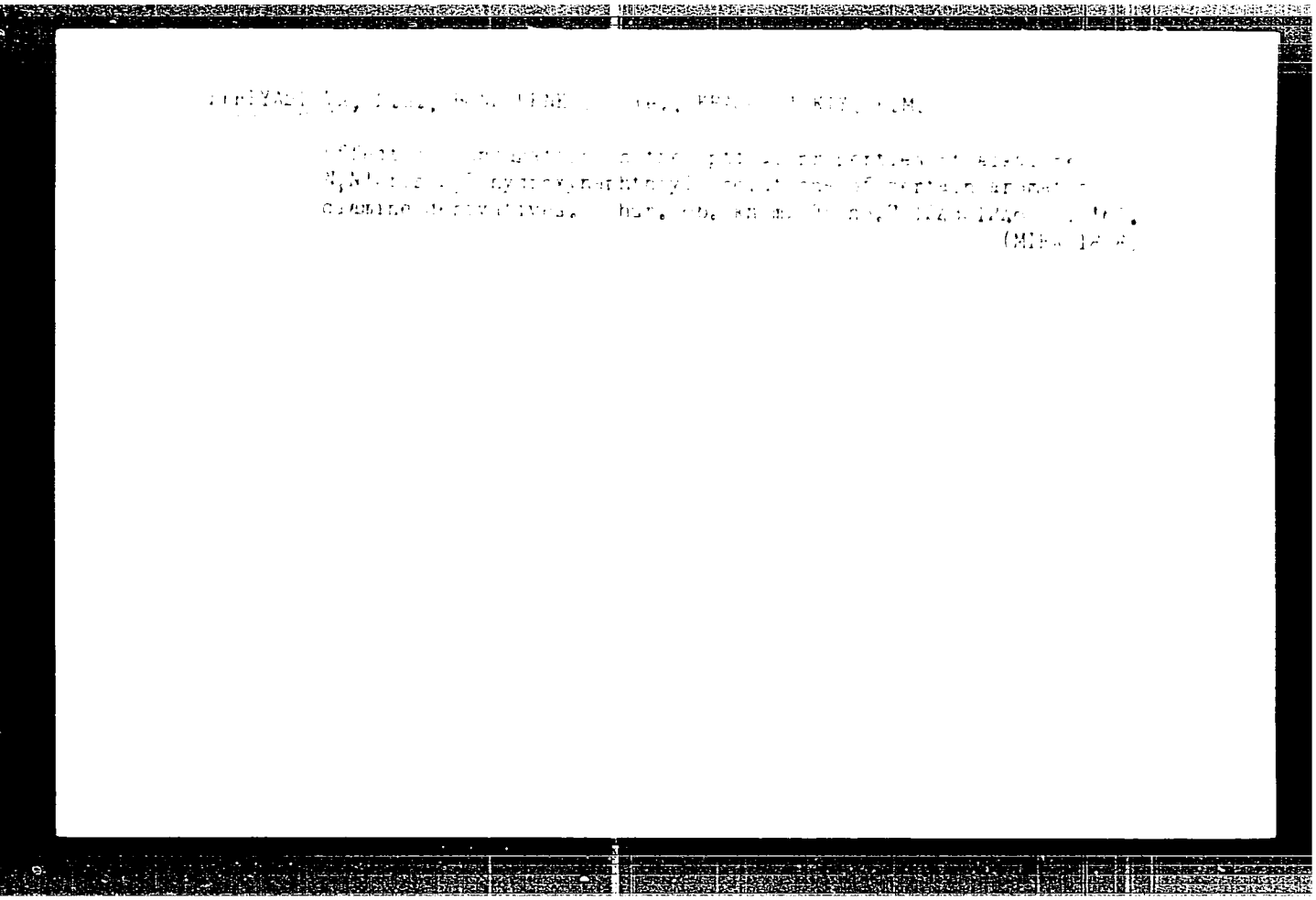

KRASOVITSKIY, B.M.; PEREYASLOVA, D.G.; PAVOROZHNYY, B.A.; VINETSKAYA, Yu.M.; ISHCHENKO, I.K.

Certain optical properies of 4-chloro-2-sulfobenzalacetophenone. Dokl. AN SSSR 160 no.1:123-124 Ja '65. (MIRA 18:2)

1. Vsesoyuznyy nauchno-issledovatel'skiy institut monokristallov, stsintillyatsionnykh materialov i osobo chistykh khimicheskikh veshchestv. Submitted July 3, 1964.

L 60266-65 EPF(c)/EWP(j)/EWA(c)/EWT(m) Pc-4/Pr-4 RPL JAJ/RM
ACCESSION NR: AP5018600 UR/0079/65/035/007/1243/1246
547.553.1 : 543.426

AUTHOR: Pereyaslova, D. G.; Bondarenko, V. Ye.; Krasovitskiy, B. M.

TITLE: Influence of conjugation on optical properties of alkaline solutions of N,N'-di'(2,3-oxynaphthoyl) derivatives of certain aromatic diamines

SOURCE: Zhurnal obshchey khimii, v. 35, no. 7, 1965, 1243-1246

TOPIC TAGS: conjugation, aromatic, diamine, N,N'-di-(2,3-oxynaphthoyl) derivative

ABSTRACT: Optical properties of N,N'-di-(2,3-oxynaphthoyl) derivatives of meta- and para- phenylenediamine, benzidine, and 2,2'- and 3,3'-disubstituted benzidine derivatives were investigated by UV- spectroscopy. For comparison UV- spectra of an anilide and ortho-aniside of 2,3-oxynaphthoic acid were taken. Absorption and fluorescence maxima (in mμ) were measured in a 5% NaOH solution. Absorption and fluorescence spectra of anilide of 2,3-oxynaphthoic acid and of N,N'-di-(2,3-oxynaphthoyl)-benzidine are shown in fig. 1 of the Enclosure. Out of the three bands only the middle one (~320 mμ) is affected by conjugation within the molecule. Doubling of the molecule of anilide of 2,3-oxynaphthoic acid results in a bathochromal

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L 60266-65

ACCESSION NR: AP5018600 O

intensification of the middle absorption band. A decline in conjugation between the amide groups of the di-oxynaphthoyl diamide derivatives always results in a shift of the middle absorption band toward the short wave length region. Maxima of fluorescence of the doubled molecules occur in a shorter wave region than those of the "Half-molecules". The effect of conjugation on displacement of the fluorescence maxima is greater for the single than for the doubled molecules. Maxima of fluorescence of ortho-oxybenzoyl derivatives of benzidine occur in a shorter wave length region than those of the corresponding 2,3-oxynaphthoyl derivatives of benzidine. The effect of conjugation on displacement of fluorescence maxima is greater in the former case. Orig. art. has: 1 figure and 1 table.

ASSOCIATION: none

SUBMITTED: 08May64 ENCL: 01 SUB CODE: OC, OP

NO REF SOV: 007 OTHER: 004

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L 60266-65

ACCESSION NR: AP5018600

ENCLOSURE: 01

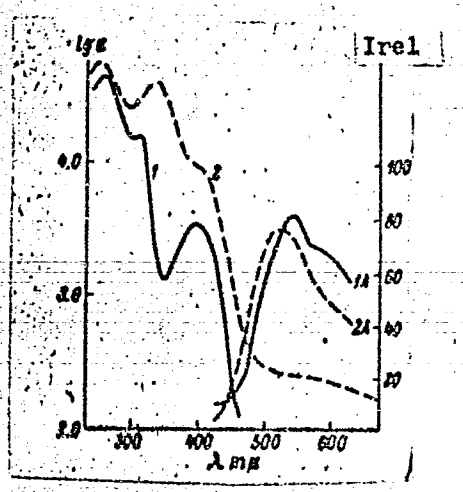

Fig. 1. Curves for absorption and fluorescence spectra of anilided 2,3-oxynaphthoic acid (1, 1A) and N,N'-di-(2,3-oxynaphthoyl)-benzidine (2, 2A).

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L 3233-66 FSS-2/EWT(l)/FS(v)-3/FCC/EWA(d)/EWA(h) TT/GS/GW

ACCESSION NR: AT5023630 UR/0000/65/000/000/0510/0510

AUTHORS: Avdyushin, S. I.; Kogan, R. M.; Nazarova, M. N.; Pereyaslova, N. K.; Petrenko, I. Ye.; Svidskiy, P. M.

TITLE: Recording of cosmic rays on the satellite Kosmos-17

SOURCE: Vsesoyuznaya konferentsiya po fizike kosmicheskogo prostranstva. Moscow, 1965. Issledovaniya kosmicheskogo prostranstva (Space research); trudy konferentsii. Moscow, Izd-vo Nauka, 1965, 510

TOPIC TAGS: artificial earth satellite, cosmic ray, scintillation counter, Geiger counter/Kosmos 17 satellite, Kosmos 7 satellite, Explorer 7 satellite

ABSTRACT: In May 1963 scintillation and Geiger counters were used to measure the intensity of cosmic radiation outside the Van Allen belt at altitudes of 260–780 km. The dependence of radiation intensity on the invariant coordinate L was determined. The flux of charged particles was observed to change from 0.5 particles per cm^2 per sec in the equatorial region to 3.0 particles per cm^2 per sec in high latitudes. The gamma-quanta flux in the energy range from 0.1 to 3 Mev was found to range from 9 to 22 quanta per cm^2 per sec. The edge of the high-latitude plateau of cosmic ray intensity lies at L = 3.0. Results were compared with data from other

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L 3233-66
ACCESSION NR: AT5023630

satellites. Various combinations of scintillation and Geiger counters were used. On the assumption that particle density has the form $f(n)dn = Ae^{-\lambda n}dn$, where $A = 1.3 \cdot 10^2$ per cm^2 per sec and $\lambda = 26$ cm^2, all results are in agreement. The ratio of gamma quanta to charged particles does not depend on n; its value is 11.3. An absence of any latitudinal relationship in number of cosmic ray showers indicates that the recorded showers are generated chiefly by particles with energies exceeding 30 Bev. The total number of recorded showers leads to the conclusion that the energy threshold for generation of showers is below 60 Bev. The average gamma-quantum energy in the showers is 4.6 Mev. Considering that the contribution of a shower is 0.3 the total counting rate of a single Geiger counter, comparison of counting rates in different areas indicates a particle density in the equatorial region of 0.01, the number of showers to be 15 per cm^2 per sec, and the divergence of particles in the shower to be 15—20°. [04]

ASSOCIATION: none

SUBMITTED: 02Sep65 ENCL: 00 SUB CODE: AA, SV

NO REF SOV: 000 OTHER: 000 ATD PRESS: 4106

Card 2/2

L 2990-66 FSS-2/EWT(1)/FCC/EWA(d)/EWA(h) TT/GS/GW

ACCESSION NR: AT5023631 UR/0000/65/000/000/0511/0512

AUTHOR: Avdyushin, S. I.; Pereyaslova, N. K.; Petrenko, I. Ye. 54

TITLE: Intensity of ionizing radiation as measured by Zond-1 B+1

SOURCE: Vsesoyuznaya konferentsiya po fizike kosmicheskogo prostranstva. Moscow, 1965. Issledovaniya kosmicheskogo prostranstva (Space research); trudy konferentsii. Moscow, Izd-vo Nauka, 1965, 511-512

TOPIC TAGS: radiation counter, particle counter, Geiger counter, cosmic ray intensity, ionizing radiation/Zond 1 satellite

ABSTRACT: Measurements of cosmic radiation intensity outside the Earth's magnetic field were made by Zond-1 using eight STS-5 Geiger counters with shielding of 10 g/cm^2. One centrally located counter was additionally shielded by the other seven. Total pulse count rate was taken, as well as the number of coincident and noncoincident pulses recorded by the centrally located counter in conjunction with the other seven. The total flux recorded was 3.37 ± 0.40 cm^{-2}·sec^{-1}, which is an increase over the 1959 level and is in agreement with the 11-yr solar activity cycle. The noncoincidence count rate (referred to a unit area) was 1.3 ± 0.2 cm^{-2}·sec^{-1} and is thought

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L 2990-66

ACCESSION NR: AT5023631 O

to be caused mainly by γ-quanta with energy of 1 Mev or more arising from the interaction of primary cosmic particles with Zond-1. Since the exact spectral distribution of the γ-quanta is not known, it can only be surmised that the γ-radiation flux was of the order of a few tens of quanta per square centimeter. Orig. art. has: 1 figure and 1 table. [BD]

ASSOCIATION: none

SUBMITTED: 02Sep65 ENCL: 00 SUB CODE: ES,SV

NO REF SOV: 003 OTHER: 001 ATD PRESS: 4109

Card 2/2 kl

L 6855-65 EWT(m)/EWP(j) DIAAP/RAEM(c)/AFWL/SSD/AFMDC/ESD(gs)/ESD(t) RM

ACCESSION NR: AR4044271 S/0272/64/000/006/0164/0164

SOURCE: Ref. zh. Metrologiya i izmeritel'naya tekhnika. Otdel'ny*y vy*pusk, Abs. 6.32.1161 48

AUTHOR: Maly*shev, A. B.; Pereyaslova, N. K

TITLE: The use of a plastic scintillator in β-spectrometry 19

CITED SOURCE: Sb. Stsintillyatory* i stsintillyats. materialy*. Khar'kov, Khar'kovsk. un-t, 1963, 212-216

TOPIC TAGS: scintillator, plastic scintillator, beta particle, beta detector, beta spectrum, electron, spectrometer, spectrometry, beta spectrometer, beta spectrometry

TRANSLATION: Describes the design of a 4π β-particle detector using scintillation plastic manufactured at the Institute of Applied Geophysics of the Academy of Sciences of the USSR. The selected design assures almost 100% registration of electrons with energy resolution of 17% on the line of conversion electrons of the

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L 6855-65
ACCESSION NR: AR4044271

Cs^{137} isotope. The value of the internal conversion coefficient of Ba^{137m} (obtained on the spectrometer using such a detector), $\alpha=0.1000\pm0.0200$ agrees with the value $\alpha=0.0997$. Measurements of the complex spectra showed that there is possible separation of 3-4 groups of electrons; the boundary energies of these groups were 400-500 kev apart. Here the measureable activities can be quite small: 10^{-9} curies. The threshold of sensitivity of the spectrometer is determined by the level of the interference background.

SUB CODE: OP, NP ENCL: 00

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66367

21.5300 SOV/120-59-5-10/46

AUTHORS: Kirdina, G.A. and Pereyaslova, N.K.

TITLE: Preparation and Properties of Large-volume Plastic Scintillators

PERIODICAL: Pribory i tekhnika eksperimenta, 1959, Nr 5, pp 47 - 51 (USSR)

ABSTRACT: The method of preparation of large-volume scintillators (~10 l used by the present authors is somewhat different from that described in Refs 4-7. Technical styrene may contain moisture, hydroquinone and ethyl-benzene. The presence of such impurities is undesirable. To remove the moisture, the styrene was dried over calcium chloride with subsequent filtration. The dried and filtered monomer was subjected to a four-fold vacuum distillation and the distilled styrene was then heated to 60 °C. A 2% addition of p-terphenyl and 0.02% of POPOP were then introduced. The solution was filtered in the hot state into a pure-glass container (Figure 1), the air was removed and the container was sealed off at a pressure of 0.4 mm Hg. The container was then placed in a water bath in order to remove any luminescing impurities. The molybdenum glass container

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Preparation and Properties of Large-volume Plastic Scintillators

was then placed in a thermostated bath filled with glycerin at 80 °C and the temperature was uniformly increased at the rate of about 2 °C/h. At about 105-106 °C the exothermic process of formation of polymerisation centres began and this led to a rapid increase in the temperature (about 10 min) to 115-120 °C. The container was kept at this temperature for 3-4 hours. The temperature was then uniformly increased at the rate of about 10 °C/h up to 200 °C and the temperature was kept at this value for 18 hours. From the polymeristation process, the volume changes by about 15% and this leads to the appearance of internal stresses. These stresses were removed by slowly (2 °C/h) cooling the container from 200-30 °C. The container was then opened and the scintillators removed at about 50 °C. The following properties of the scintillators obtained in the above way were investigated.

1) Light output.
2) Decay time.
3) Differential spectra.

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Preparation and Properties of Large-volume Plastic Scintillators

4) Sensitivity.
5) Self-absorption.

Figure 3 shows the differential spectra for Cs^{137}, Zn^{65}, Co^{60} and for 5.1 MeV of α-particles. The curves were obtained with a scintillator 4.75 l. in volume. The time constant for the scintillator was found to be about 6 nanosec. The specific sensitivity to γ-radiation was found to be 70 pulses/sec/litre per μr/h. Acknowledgments are made to R.M. Kogan for valuable suggestions, M.I. Sitnikova for help in the measurements and Z.A. Kornilova for taking part in the production of the scintillators.

There are 4 figures, 2 tables and 8 references, 4 of which are Soviet and 4 English.

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66367

SOV/120-59-5-10/46

Preparation and Properties of Large-volume Plastic Scintillators

ASSOCIATION: Institut prikladnoy geofiziki AN SSSR
(Institute of Applied Geophysics of the Ac.Sc.USSR)

SUBMITTED: September 3, 1958

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Card 4/4

44439

S/120/62/000/006/006/029
E192/E382

9.6150

AUTHORS: Nazarova, M.N. and Pereyaslova, N.K.

TITLE: Temperature-dependence of the parameters of a scintillation transducer

PERIODICAL: Pribory i tekhnika eksperimenta, no. 6, 1962, 49 - 51

TEXT: Crystals of NaI(Tl) and CsI(Tl), 40 x 40 mm^2, with photomultiplier tubes ФЭУ-1С (FEU-1S), ФЭУ (FEU)-24, FEU-13, FEU-15 and FEU-16 were used in this experimental investigation of the temperature-dependence of the pulse-amplitude energy resolution and flash time over the range of temperatures from 20 - 90 °C. The photomultipliers were high-stability tubes with an amplitude spread of less than 3% per 48 hours. The scintillator was placed in a thermostat where the temperature could be kept constant to within 1 °C. The pulse-amplitude A and the energy resolution R were measured by the amplitude analyser type АИ-100 (AI-100), using the isotope Cs^{137}. The flash time τ of the scintillators was measured by a fast oscilloscope. The decrease in the pulse-amplitude when using NaI(Tl) crystals and various types of photomultipliers amounted to 30 - 50% at 90 °C and this was accompanied

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by a corresponding deterioration in the energy resolution. This can be explained by the reduction in the quantum yield of the photocathode and by the change in the radiation spectrum of the scintillator and the spectral sensitivity of the photocathode. The temperature variation appeared to have the least effect on the pulse-amplitude energy resolution when using transducers with CsI(Tl) crystals and the photomultipliers type FEU-15, FEU-16 and FEU-13; A and R did not change more than about 3% between 20 and 60 °C. The reduction in τ was roughly proportional to the temperature and amounted to about 50% at 90 °C. There are 5 figures and 1 table.

ASSOCIATION: Institut prikladnoy geofiziki AN SSSR (Institute of Applied Geophysics of the AS USSR)

SUBMITTED: February 19, 1962